

1. A system for optimizing a request-promise workflow, the system comprising:

a first entity operable to:

produce one or more supplies; and

optimize its production of the supplies to

generate a promise for the supplies; and

a second entity operable to:

optimize its production of a demand to generate a request for the supplies;

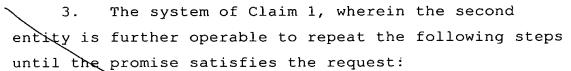
communicate the request to the first entity; receive a promise for the supplies from the first entity based on the request; and

reoptimize its production of the demand to generate a new request if the promise does not satisfy the request.

2. The system of Claim 1, further comprising a communication link operable to convey information between the first entity and the second entity.

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optimizing its production of a demand to generate a request for the supplies;

communicating the request to the first entity;
receiving a promise for the supplies from the first entity based on the request; and

reoptimizing its production of the demand to generate a new request if the promise does not satisfy the request.

4. The system of Claim 1, wherein:

the first entity is further operable to optimize its production of the supplies independently of the second entity; and

the second entity is further operable to optimize its production of the demand independently of the first entity.

5. The system of Claim 1, wherein:

the request comprises a first request for a first supply and a second request for a second supply; and

the promise comprises a first promise for the first supply and a second promise for the second supply.

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6. The system of Claim 5, wherein:
the second promise does not satisfy the second request; and

the second entity is further operable to optimize its production to generate a new request using the second promise as a constraint.

7. The system of Claim 1, wherein:

the request comprises a bundled request for at least two supplies to produce the demand;

the promise in response to the bundled request comprises a first promise, a second promise, and a culprit identifying the second promise as the cause for not satisfying the bundled request; and

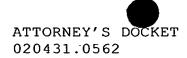
the second entity is operable to reoptimize its production to generate a new request using the second promise as a constraint.

8. The system of Claim 1, wherein:

the promise comprises an optimization objective and a promise constraint; and

the second entity is operable to reoptimize its production to generate a new request using the promise constraint and the optimization objective.

9. The system of Claim 1, wherein the second entity is operable to generate a request in accordance with one or more internal resources.





10. The system of Claim 1, wherein the second entity is operable to communicate a demand promise to a client if the promise satisfies the request.



11. A method for optimizing a request-promise workflow, the method comprising:

establishing a demand, wherein one or more supplies are needed to satisfy the demand;

assuming that the supplies are unlimited; optimizing the production of the demand to generate a request f ar the supplies needed to satisfy the demand; communidating the request to a supplier; receiving\ a promise from the supplier;

determining whether the promise satisfies the request; and

if the promise does not satisfy the request, reoptimizing the production of the demand to generate a new request.

The method of Claim 11, further comprising 12. repeating the following steps until the promise satisfies the request:

optimizing the production of the demand to generate a request for the supplies needed to satisfy the demand; communicating the request to a supplier; receiving a promise from the supplier; determining whether the promise satisfies the

if the promise does not satisfy the request, reoptimizing the production of the demand to generate a new request.

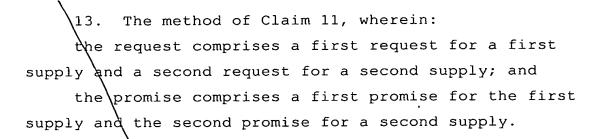
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request; and



14. The method of Claim 13, wherein: the second promise does not satisfy the second request; and

the step of reoptimizing the production of the demand to generate a new request further comprises using the second promise as a constraint.

15. The method of Claim 11, wherein:

the request comprises a bundled request having a first request for a first supply and a second request for a second supply; and

the promise comprises a first promise, a second promise, and a culprit identifying the second promise as the cause for not satisfying the bundled request.

- 16. The method of Claim 15, wherein the step of reoptimizing the production of the demand to generate a new request further comprises using the second promise as a constraint.
- 17. The method of Claim 15, wherein the bundled request comprises the supplies required for one demand.

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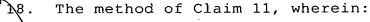
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the promise comprises an optimization objective and a promise constraint; and

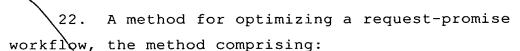
the step of reoptimizing the production of the demand to generate a new request further comprises using the promise constraint and the optimization objective.

19. The method δf Claim 11, wherein:

the step of optimizing the production of the demand to generate a request of the supplies needed to satisfy the demand further comprises generating the request in accordance with one or more internal resources; and

the step of reoptimizing the production of the demand to generate a new request further comprises generating the new request in accordance with one or more internal resources.

- 20. The method of Claim 11, wherein determining whether the promise satisfies the request comprises determining whether the promise falls within an acceptable range.
- 21. The method of Claim 11, further comprising 25 communicating a demand promise to a client if the promise satisfies the request.



establishing a demand, wherein one or more supplies are needed to satisfy the demand;

assuming that the supplies are unlimited;

optimizing the production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand;

communicating the first request to a first supplier; communicating the second request to a second

/supplier;

receiving a first promise for the first supply from the first supplier;

receiving a second promise for the second supply from the second supplier;

determining whether the first promise satisfies the first request;

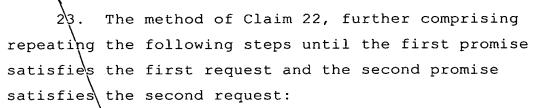
determining whether the second promise satisfies the second request; and

if the first promise does not satisfy the first request or the second promise does not satisfy the second request, reoptimizing the production of the demand to generate a new first request and a new second request.

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optimizing the production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand;

communicating the first request to a first supplier; communicating the second request to a second supplier;

receiving a first promise for the first supply from the first supplier.

receiving a second promise for the second supply from the second supplier;

determining whether the first promise satisfies the first request;

determining whether the second promise satisfies the second request; and

if the first promise does not satisfy the first request or the second promise does not satisfy the second request, reoptimizing the production of the demand to generate a new first request and a new second request.

24. The method of Claim 22, wherein:

the second promise does not satisfy the second request; and

the step of reoptimizing the production of the demand to generate a new first request and a new second request further comprises using the second promise as a constraint.

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25. The method of Claim 22, wherein the request comprises a bundled request for one or more supplies required for one demand.

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26. The method of Claim 25, wherein the request further comprises a sub-bundled request for the supplies supplied by the first supplier.

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27. The method of Claim 26, further comprising:
receiving a first promise for the first supply from
the first supplier, wherein the first promise comprises a
culprit identifying a culprit promise that does not

satisfy the sub-bundled request; and

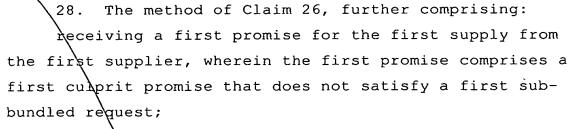
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reoptimizing the production of the demand to generate a new first request and a new second request using the culprit promise as a constraint.

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receiving a second promise for the second supply from the second supplier, wherein the second promise comprises a second culprit promise that does not satisfy a second sub-bundled request, wherein the second sub-bundled promise is larger than the first sub-bundled promise;

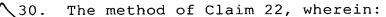
reoptimizing the production of the demand to generate a new first request and a new second request using the first culprit promise as a constraint.

29. The method of Claim 22, wherein:
the first promise comprises an optimization
objective and a promise constraint; and

the step of reoptimizing the production of the demand to generate a new first request and a new second request further comprises using the promise constraint and the optimization objective.

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the step of optimizing the production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand further comprises generating the first request in accordance with one or more internal resources; and

the step of reoptimizing the production of the demand to generate a new first request and a new second request further comprises generating the new first request and a new second request in accordance with one or more internal resources.

- 31. The method of Claim 22, wherein determining whether the first promise satisfies the first request comprises determining whether the first promise falls within an acceptable range.
- 32. The method of Claim 22, further comprising communicating a demand promise to a client if the first promise satisfies the first request and the second promise satisfies the second request.

